Evaluation of a liaison librarian program: client and liaison perspectives*

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Objectives: This paper describes a survey-based evaluation of the five-year old Liaison Librarian Program at the University of Florida.

Methods: Liaison librarians, faculty, students, staff, residents, and post-doctoral associates were queried via Web-based surveys. Questions addressed client and liaison perspectives on a variety of issues, including program and service awareness and usage, client-library relations and communication, client support for the program, and liaison workload.

Results: Approximately 43% of the 323 client respondents were aware of liaison services; 72% (n = 163) of these clients had had contact with their liaison. Ninety-five percent (n = 101) of faculty and students who reported contact with their liaison supported the continuation of the program. Liaison services were used by a greater percentage of faculty than students, although they had similar patterns of usage and reported the same "traditional" services to be most important. Liaisons indicated that communications with clients had increased, the reputation of the library was enhanced, and their workloads had increased as a result of the Liaison Librarian Program.

Conclusions and Recommendations: Survey results suggest that the Liaison Librarian Program has a core set of clients who use and highly value the services provided by liaisons. Recommendations addressing workload, training, marketing, and administrative support are provided.

Highlights

- The liaison program evaluation process considers responses of the faculty and students from six health-related colleges, as well as the participating liaison librarians.
- Evaluation results cover client and liaison perspectives on the importance and impact of particular liaison services.

Implications for practice

- This paper presents a number of recommendations and areas of concern to consider when planning or redesigning a library liaison program.
- Providing customized and personalized services results in higher user satisfaction, increased library-client communication, and better relationships between client and library.
- Users who have one point of contact in a library system and know their librarian by name are more likely to find value in a liaison librarian program.

INTRODUCTION

Liaison librarian, library liaison, subject bibliographer, subject librarian, subject specialist—different names for the same concept: a librarian who focuses on a particular subject area and client base. This approach to service, which has existed to varying degrees for decades, has been shown to facilitate communication with clients, enhance the reputation of the library, and improve services [1–6]. In recent years, interest has increased in formalizing these programs, providing them with more structure, and developing ways for

libraries and librarians to receive credit for such work [7].

The liaison literature has focused on the creation and development of liaison programs [8–12] as well as particular aspects of liaison services, such as collection development [13–15], involvement in specialized instruction [16–19], or college-level curriculum committees [20]. Other investigators described programs in specialized settings such as biotechnology research centers [1, 21] or small libraries [22]. Client and liaison surveys have been popular tools to assess user and librarian perspectives. Glynn and Wu [23] surveyed library liaisons at Rutgers University in an effort to develop more effective liaison relations with teaching faculty departments. Mozenter et al. [24] presented a survey of departmental faculty in anticipation of restructuring a liaison program. Yang's [6] survey of faculty department representatives intended to elucidate client perceptions on service usage and liaison program effectiveness. Konata and Thaxton [25] surveyed University of Georgia liaisons and faculty for their perspectives on a new liaison program. The current study appears to be the first attempt to evaluate a liaison program through surveys intended for all primary clientele—faculty, students, staff, residents, and postdoctoral associates—as well as liaison librarians.

DEVELOPMENT, IMPLEMENTATION, AND EVOLUTION OF THE PROGRAM

In 1998, the University of Florida (UF) Health Science Center Library (HSCL) created a formal Liaison Librarian Program (LLP), dedicated to increasing communication with and improving services to the library's primary clientele—faculty, students, and staff of the colleges of dentistry, health professions, medicine, nursing, pharmacy, and veterinary medicine [8]. The program was based on intense subject-specialization and customization of services as determined by client information needs. Aside from liaisons making contact with their clients, no particular activities were prescribed; however, more than fifty potential activities were suggested. This approach was designed to allow liaisons the flexibility to respond to the needs of their assigned units and not be penalized if clients did not embrace particular services. The HSCL marketing/public relations coordinator heavily marketed the new program, as recommended in the liaison literature [12, 25, 26].

As a first attempt at evaluation, College of Veterinary Medicine (COVM) members were surveyed in 1999 to determine client awareness and usage of LLP services [27]. Thirty-two percent (n = 19) of responding clients indicated that they were aware of the LLP. Of these, 33% (n = 6) had used liaison services. One year later, after the program was heavily marketed, the survey was repeated and 79% (n = 33) of respondents indicated that they were aware of the LLP; 42% (n = 26) of these respondents had used the service.

The LLP continued to evolve. A vacancy in the nursing liaison position provided the HSCL with an op-

portunity to partner with the college, which agreed to fund the position [28]. In 2001, the UF Genetics Institute created and funded a new position, bioinformatics librarian [29], filled by the original basic sciences liaison. These unit-based liaisons are housed in the library and provide typical liaison services as well as more specialized ones requested by their academic units or identified by the liaisons. Thus the LLP evolved into a program with two tiers of liaisons: the unit-based and the library-based. This arrangement is not unique. Konata and Thaxton [25] described two liaison types, the subject specialist and the liaison librarian, and Mozenter et al. [24] discussed primary and adjunct liaisons.

By 2003, the program had reached a level of maturity to warrant full evaluation. Clients and liaisons were surveyed concerning their perceptions of program usage, efficacy, value, and related issues, while liaisons also explored the internal workings of the program.

METHODOLOGY

Four practicing liaisons were named to the LLP Evaluation Team to perform the formal evaluation. Although the group had a general idea of questions they wished to pose, they performed a literature review in ERIC, LibraryLit, PubMed, and Web of Science to locate relevant evaluation studies. One article in particular [6] discussed issues similar to those of interest at the HSCL, and its survey was modified to provide the starting point for the evaluation tools.

The evaluation team created separate client and liaison surveys based on the literature review, questions posed by Tennant et al. [8], findings from the COVM study [27], issues illuminated in subsequent liaison meetings, and general discussion among liaisons. The surveys were designed to evaluate the *program* and not the *liaisons*, and questions were reviewed by all liaisons for input into the survey tools. It was essential that individual liaisons not yet be evaluated for their work on a program that had not been evaluated or refined. Final versions of the surveys were sent to UF's Institutional Review Board for approval. Once approved, investigators pilot-tested the survey with faculty and students in the department of zoology, a secondary client group, to obtain a measure of face validity.

The investigators employed Web-based surveys (find Appendix A and B online) to facilitate anonymous submission. The Health Science Center (HSC) college deans distributed an email message with the survey link to foster a higher return rate and to avoid potential bias associated with liaison-delivered questionnaires. After 2 weeks, a reminder email was sent to clients by the HSCL marketing/public relations coordinator. A total of 323 responses were received. Because some clients appear on multiple email lists, and other clients have chosen to opt out of their unit lists, it is impossible to know how many clients received the email. However, investigators estimate that the client

survey was sent to approximately 1,800 faculty, 5,800 students, and 5,500 staff members.

All data were entered into Excel and cross-compared by two library assistants unaffiliated with the liaison program. The same library assistants tabulated, categorized, and cross-compared open-ended responses. Over 15,000 anonymous data points were analyzed by the lead author via basic Excel formulae. Data were analyzed to the college and rank level (e.g., COM faculty), respondents of a particular rank (e.g., all students, regardless of college), respondents of a particular college (e.g., all members of the COVM, regardless of rank), and all respondents. Over 500 open-ended responses were categorized and tabulated. Data at the department or program level were not reported in the current study due to small sample sizes.

The liaison survey was performed at approximately the same time as the client survey. All 10 liaisons responded to the survey for a 100% response rate. Responses to the open-ended questions provided intriguing, albeit cursory information. The investigators sent 2 follow-up emails to liaisons to solicit clarification, specifically for questions concerning evidence of program success, workload, and barriers to success. Eight of 10 liaisons responded to these follow-up emails. Survey responses and data analysis were handled as for the client survey. Responses to follow up emails were stripped of all identifiers and tabulated in a random order, so that identification was not possible by liaison name or respondent number and responses to different questions could not be linked to each other. Although the potential for bias might exist due to the lead author (a practicing liaison) analyzing the objective data, the use of nonaffiliated library assistants to input such numerical data and tabulate, categorize, and strip identifiers from open-ended responses should mitigate that potential.

RESULTS AND DISCUSSION

Respondent demographics, client awareness, and program usage

Table 1 provides a demographic breakdown of all responding clients. Of the clients, 43.3% (n = 323) indicated that they were aware that a liaison librarian had been assigned to them. Of these respondents, 72.6% (n = 164) reported that they knew the identity of their liaison and 72.4% (n = 163) responded that they had had contact with that liaison. In other words, virtually all clients who knew the identity of their liaison had also had contact with that liaison. Faculty members were the most likely to be aware of the program (60.3%, n = 121), know their liaison (88%, n = 75), and have had contact with that liaison (90.5%, n = 74), while residents were the least likely (aware, 16.0%, n = 25; know identity, 62.5%, n = 8; had contact, 50.0%, n = 8). These results are not surprising, as the LLP has been most heavily marketed to faculty and HSCL-resident relations are complex.

College of Nursing (CON) members (all ranks combined) had the highest percentages (aware, 97.1%, n =

Table 1
Client responses concerning awareness, identity and usage of liaisons and liaison services

Group	Percent aware liaison assigned	Percent know identity of liaison	Percent had contact with liaison
Faculty			
COD	43.7 (n = 16)	100.0 (n = 7)	100.0 (n = 7)
COHP	47.4 (n = 19)	80.0 (n = 10)	90.0 (n = 10)
COM	46.6 (n = 45)	72.7 (n = 22)	81.8 (n = 22)
CON	100.0 (n = 23)	100.0 (n = 23)	100.0 (n = 22)
COP	87.5 (n = 8)	100.0 (n = 7)	85.7 (n = 7)
COVM	60.0 (n = 10)	83.3 (n = 6)	83.3 (n = 6)
All	60.3 (n = 121)	88.0 (n = 75)	90.5 (n = 74)
Residents			
COD	100.0 (n = 1)	100.0 (n = 1)	— (n = 1)
COM	12.5 (n = 24)	57.1 (n = 7)	51.7 (n = 7)
All	16.0 (n = 25)	62.5 (n = 8)	50.0 (n = 8)
Staff			
COD	100.0 (n = 2)	100.0 (n = 2)	100.0 (n = 2)
COHP	37.5 (n = 8)	66.7 (n = 3)	66.7 (n = 3)
COM	15.0 (n = 20)	28.6 (n = 7)	28.6 (n = 7)
CON	100.0 (n = 2)	100.0 (n = 2)	100.0 (n = 2)
COP	50.0 (n = 2)	100.0 (n = 1)	100.0 (n = 1)
COVM	12.5 (n = 2)	— (n = 1)	— (n = 1)
All	28.6 (n = 42)	56.3 (n = 16)	56.3 (n = 16)
Students			
COD	50.0 (n = 8)	100.0 (n = 6)	66.6 (n = 6)
COHP	50.0 (n = 18)	54.5 (n = 11)	63.6 (n = 11)
COM	37.0 (n = 46)	40.9 (n = 22)	54.5 (n = 22)
CON	88.9 (n = 9)	88.9 (n = 9)	88.9 (n = 9)
COP	25.6 (n = 43)	64.3 (n = 14)	50.0 (n = 14)
COVM	18.2 (n = 11)	33.3 (n = 3)	— (n = 3)
All	37.8 (n = 135)	60.0 (n = 65)	58.5 (n = 65)
Totals			
COD	51.9 (n = 27)	100.0 (n = 16)	81.3 (n = 16)
COHP	46.7 (n = 45)	66.7 (n = 24)	75.0 (n = 24)
COM	32.6 (n = 135)	53.4 (n = 58)	62.1 (n = 58)
CON	97.1 (n = 34)	97.1 (n = 34)	97.0 (n = 33)
COP	35.8 (n = 53)	77.3 (n = 22)	68.2 (n = 22)
COVM	31.0 (n = 29)	60.0 (n = 10)	50.0 (n = 10)
All respondents	43.3 (n = 323)	72.6 (n = 164)	72.4 (n = 163)

Note: COD = college of dentistry, COHP = college of health professions, COM = college of medicine, CON = college of nursing, COP = college of pharmacy, COVM = college of veterinary medicine.

34; know identity, 97.1%, n = 34; had contact, 97.0%, n = 33), while the COVM percentages (all ranks combined) were the lowest (aware, 31.0%, n = 29; know identity, 60.0%, n = 10; had contact, 50.0%, n = 10). The percentages for the CON are logical, due to the existence of the highly marketed, unit-based liaison.

The percentages for the COVM are disappointing, given the increased levels of awareness and usage reported in the previous survey of that college [27]; however, COVM students' responses (aware, 18.2%, n = 11; know identity, 33.3%, n = 3; had contact, less than 1%, n = 3), rather than those of faculty (aware, 60.0%, n = 10; know identity, 83.3%, n = 6; had contact, 83.3%, n = 6), are responsible for these decreased levels of knowledge and use. These results suggest that consistent marketing is important especially for students, who turn over more rapidly than faculty. Because the HSCL has marketed the LLP primarily to faculty and students, and response rates were low from residents and staff, further data for the latter populations are not reported herein.

Table 2
Faculty and student responses regarding program effects on relationship with library and program continuation

Group	Liaison program improved relationships and increased communications with library		Continue the liaison program	
	Percent improved relations	Percent increased communications	Percent retain program (all respondents)	Percent retain program (those with liaison contact)
Faculty				
COD	100.0 (n = 7)	85.7 (n = 7)	82.4 (n = 17)	100.0 (n = 7)
COHP	100.0 (n = 9)	88.9 (n = 9)	94.1 (n = 9)	100.0 (n = 9)
COM	66.7 (n = 21)	47.6 (n = 21)	79.5 (n = 39)	100.0 (n = 16)
CON	100.0 (n = 20)	85.0 (n = 20)	95.7 (n = 23)	100.0 (n = 22)
COP	85.7 (n = 7)	71.4 (n = 7)	100.0 (n = 8)	100.0 (n = 6)
COVM	83.3 (n = 6)	66.7 (n = 6)	80.0 (n = 8)	100.0 (n = 5)
All faculty	87.1 (n = 70)	71.4 (n = 70)	86.8 (n = 114)	100.0 (n = 65)
Students				
COD	40.0 (n = 5)	40.0 (n = 5)	62.5 (n = 8)	66.7 (n = 3)
COHP	25.0 (n = 8)	12.5 (n = 8)	88.9 (n = 18)	85.7 (n = 7)
COM	53.8 (n = 13)	30.8 (n = 13)	86.4 (n = 44)	100.0 (n = 11)
CON	62.5 (n = 8)	33.3 (n = 6)	77.8 (n = 9)	75.0 (n = 8)
COP	55.6 (n = 9)	11.1 (n = 9)	85.4 (n = 41)	85.7 (n = 7)
COVM	— (n = 2)	— (n = 2)	83.3 (n = 12)	— (n = 0)
All students	46.7 (n = 45)	23.3 (n = 43)	84.1 (n = 132)	86.1 (n = 36)
Combined				
Faculty and students	71.3 (n = 115)	53.1 (n = 113)	85.4 (n = 246)	95.0 (n = 101)

Note: COD = college of dentistry, COHP = college of health professions, COM = college of medicine, CON = college of nursing, COP = college of pharmacy, COVM = college of veterinary medicine.

Client and liaison perspectives on relationships, communication, value, and library enhancement

When combined, 71.3% (n = 115) of faculty and student respondents indicated that their relationship with the library had improved since the liaison program had been developed, while 53.1% (n = 113) indicated that their communications with the library had increased. Table 2 provides responses by college and rank, and Table 3 provides the most frequent open-ended responses. Sixty-six percent (n = 3) of liaisons who had been with the library prior to the beginning of the liaison program responded that communications had improved.

Overall, 85.4% (n = 246) of faculty and student respondents indicated that they supported continuing the LLP. When the responses were limited to those who had had contact with their liaison, the number rose to 95.0% (n = 101) (Table 2). Although not asked to do so, 17 respondents named their liaisons in open-ended responses, and, in each case, the comment with the name was clearly positive in nature. Terms used to describe these identified liaisons included ''excellent,'' ''available,'' ''helpful,'' ''informative,'' ''prompt,'' ''professional,'' ''responsive,'' ''wonderful,'' ''active contributor,'' and ''easy to talk to.'' Questions dealing with relationship and continuation of the program yielded the most positive responses from faculty. Some representative responses included (italics added):

- ''I think it is a very valuable resource that *increases faculty productivity*''
- ''We have an ongoing active professional relationship. *Our degree program is greatly enhanced by this*''
- ''My research and teaching *productivity and efficacy have increased*''
- ''Because this partnership can *improve working and teaching*''

Overall, the percentages of respondents who had

Table 3
Most frequent open-ended responses

Top reasons for improved relationship	■ Received assistance with a particular named task such as bibliographic instruction, help with projects, assistance finding e-journals, collection development (17 respondents) ■ Liaison made patron aware of previously unknown services (16 respondents) ■ Patron now knows whom to contact for assistance (11 respondents)
Top reasons for increased communication	■ Received assistance with a particular named task such as bibliographic instruction, help with projects, assistance finding e-journals, collection development (9 respondents) ■ Liaison successfully keeps patron informed (7 respondents) ■ Personal connection made with liaison (6 respondents) ■ Quick response from liaisons (6 respondents)
Top reasons respondents support LLP continuation	■ Liaison knows subject area or academic unit information needs (22 respondents) ■ Liaison serves as point-person or single contact (20 respondents) ■ Program is a good idea (unspecified as to why; 16 respondents)
Top reasons respondents do not support LLP continuation	■ Client did not know LLP existed or not sure what liaisons do (27 respondents) ■ Program not needed (4 respondents) ■ Liaison not helpful when used (2 respondents)

Table 4
Faculty responses to use of services and importance of services

Liaison services	Percent using service	Use "rank"	Impor- tance "score"	Impor- tance "rank"
Basic research	36.4	2	3.8	1
Access to electronic journals	32.8	4	3.8	1
Database search assistance	33.6	3	3.8	1
Services, policies, and pro- cedures	37.8	1	3.6	4
Materials owned	27.7	5	3.6	4

Note: "Ranks" are 1 = highest use or importance, 17 = lowest use or im- portance. Importance "scores" are based on a scale of 1–5: 1 = least impor- tant, 5 = most important.

Table 5
Student responses to use of services and importance of services

Liaison services	Percent using service	Use "rank"	Impor- tance "score"	Impor- tance "rank"
Basic research	21.6	1	4.1	1
Order books or journals	12.2	4	3.9	2
Access to e-journals	16.6	2	3.9	2
Services, policies, and pro- cedures	9.4	6	3.8	4
Database search assistance	13.0	3	3.8	4

Note: "Ranks" are 1 = highest use or importance, 17 = lowest use or im- portance. Importance "scores" are based on a scale of 1–5: 1 = least impor- tant, 5 = most important.

contact with their liaisons and reported increased communication, an improved relationship with the li- brary, and supported the continuation of the liaison program suggested that the LLP has been effective from the client perspective.

The liaison survey also addressed whether the LLP enhanced the reputation of the library and librarians. All nine responding liaisons agreed and cited several lines of evidence. Three liaisons have published with their academic faculty; two liaisons have presented at meetings with their academic faculty; two liaison po- sitions are funded by outside units; five of six colleges have librarians assigned to their curriculum commit- tees; one liaison has been awarded joint appointment to an academic department; one liaison has been asked to co-teach a course with her faculty; liaisons are asked to serve on HSC and college committees; and liaisons have received increased requests for research assis- tance, in-office reference, and bibliographic instruction. These lines of evidence, coupled with positive open- ended responses in the client survey, suggested that the LLP has enhanced the status of the library and liaisons.

Specific service usage and importance

The survey also asked clients to indicate which of 17 listed liaison services they had used and to rank these tasks on the basis of importance. No single service was used by more than 38% of faculty or 22% of students. Faculty (Table 4) and students (Table 5) generally agreed on importance. Traditional library services such as research and resource assistance, materials re- quests, and assistance locating materials or explaining policies or services, rounded out the top six services. Five less traditional activities made the bottom of the list for both faculty and students: "present at your journal club," "present at your faculty or departmental meeting," "attend grand rounds," "ask liaison to join your research group," and "library tour or orientation for faculty job or student interviewees."

Many of Yang's [6] results regarding the importance of services were similar, even though only faculty de- partmental representatives were surveyed in that study. Faculty representatives ranked informing or up- dating faculty on library services, changes, and strat- egies for instructional support; ordering materials; and conveying suggestions to library administration as most important. The "importance" lists of Yang and the current study indicated that faculty have a "tra- ditional" idea regarding the importance of library ser- vices. As in the current study, Yang's respondents con- sidered services such as "offering seminars on the li- brary's resources" and "demonstrating databases" as far less important than putative core library services. These results raised the question: Should liaisons con- centrate only on traditional tasks or instead educate faculty about how liaisons can enhance the institution's mission through these less traditional roles?

Liaisons were asked, in parallel to the client survey, to rank the frequency of and preference for performing 19 activities (Table 6). Individual liaisons reported per- forming between 6 and 18 of the 19 tasks (mean per liaison = 14.1, 74.2%). The top 5 tasks in terms of fre- quency were "order books, journals, etc." (score of 4.2 on a scale of 1 [never] to 5 [often]), "inform patrons of library changes" (4.1), "update patrons on new li- brary services" (3.9), "convey patrons' opinions to the library administration" (3.5), and "in-office reference" (3.5). All liaisons reported performing the 3 activities "inform patrons of library changes," "update patrons on new library services," and "convey patrons' opin- ions to the library administration," while 90% of liai- sons had provided "course-integrated instruction," "queried faculty concerning the collection," "ordered books, journals, etc.," and "information consulting."

In terms of preference to perform the tasks (based on likes and perceived importance or effectiveness), the top activities included "in-office reference" (4.8), "course-integrated instruction" (4.4), "consult with

Table 6
Liaison services: frequency and perceived preference, sorted by fre- quency

Task	Frequency	Preference
Order books, journals, etc.	4.2	4.2
Inform patrons of library changes	4.1	4.0
Update patrons on new library services	3.9	4.2
Convey patrons' opinions to the library admin- istration	3.5	3.8
Do in-office reference (via email, phone, etc.)	3.5	4.8

faculty on instructional needs'' (4.3), ''query faculty concerning collection'' (4.3), ''order books, journals, etc.'' (4.2), and ''update patrons on new library services'' (4.2). For seventeen of the nineteen tasks, the score for ''preference'' was greater than the score for ''frequency.'' All liaisons (n = 6) serving on college-level curriculum committees indicated that such work was useful and listed several of the advantages enumerated by Francis and Fisher [20]. Two liaisons listed curriculum committee service among the top three tasks in terms of impact, and faculty from three colleges mentioned the importance of liaison participation on college curriculum committees in their open-ended responses.

In general, responding liaisons (n = 8) listed three activities as having the most impact: ''faculty instruction'' (i.e., at faculty meetings, listed by 63% of respondents), ''course-integrated instruction'' (50%), and ''collection development'' (50%). Reported evidence of impact included client feedback (email follow-ups, thank you notes, and further questions), repeated teaching or speaking invitations, and increased requests for bibliographic instruction. If these top three tasks have such impact, why was only collection development on the list of most frequently performed tasks? And what barriers exist to keep liaisons from performing most activities as frequently as they deem appropriate?

Barriers to liaison communication and effectiveness

Liaisons report a variety of barriers to reaching their clients, none of which are new to the literature. Medical students have packed schedules that make it difficult to schedule course-integrated instruction, and clinical faculty are no less busy. Some clients feel that they are self-sufficient and can learn nothing from liaisons. Liaisons are also busy enough with engaged clients. The liaison literature [8, 23] indicates that email should be the primary mode of communication with clients, and 85% (n = 313) of responding clients in the current study agreed. However, some HSCL liaisons have had difficulty getting access to academic unit email distribution lists. Access to medical student lists has only been available since 2004; one college still requires that the liaison send messages through a gatekeeper; and another college does not allow access to its student lists at all.

Communication with post-doctoral associates has been a continual problem. Of all fields of science, the biomedical sciences have the largest number of post-docs [30]. Post-doctoral experiences are meant to be apprenticeships, in which associates ''gain scientific, technical, and professional skills that advance the professional career of the post-doc'' [31]. Given this impetus to learn new skills, post-docs likely have a great need for liaison services. However, most departments at the HSC do not include post-docs in their email lists, and the campus does not have one place to go to learn the identity of post-docs. It is likely that few post-docs received the survey; not surprisingly, no responses were received from this client group.

Liaison workload issues

Several questions on the liaison survey alluded to workload issues. Responses to questions on negative or positive impact on workload were mixed. Although not specifically discussing workload, a question about challenges of liaison practice prompted four of nine liaisons to cite time constraints. Similarly, the question, ''What type of support from the library would help you become a better liaison librarian?,'' elicited responses related to workload: ''hire additional liaisons,'' ''provide back-up liaisons for instruction,'' and ''allow comp time for attending academic courses in liaisons' subject areas.''

Liaisons' open-ended responses, follow-up email questions, and discussion in various meetings clearly indicated that workload has increased due to the liaison program. Participation levels in some colleges and programs have greatly outpaced expected participation, especially in the areas of in-office reference and bibliographic instruction. Increasing clients' awareness of liaison services consequently increased the demand for those services.

Education

The nexus of the LLP, the enhanced HSCL education program, and increased marketing efforts have resulted in a dramatic increase in the amount of course-integrated instruction [32] and stand-alone courses focusing on specific databases and software or resources in a subject area. While some academic programs still favor library orientations for their students, the majority of liaisons have forged strong partnerships with their academic faculty and have integrated information resource instruction in lieu of basic orientations [33]. Glynn and Wu caution that bibliographic instruction is a double-edged sword

In a sense, with successful bibliographic instruction, liaisons run the risk of becoming victims of their own success. The more students and faculty become familiar with searching productively . . . the less they need to rely upon a liaison's expertise. [23]

However, it has been the HSCL liaisons' experience that effective bibliographic instruction programs create a different type of conundrum—the more successful the instruction, the more requests to provide instruction in additional courses, to write and grade assignments, and to develop resource courses in that subject area. Twenty-five percent more educational sessions were offered by the HSCL in the 2004/05 academic year than had been offered in the year prior to LLP implementation (1997/98). However, the more startling increase involves the number of attendees, from 2,356 to 4,085. Based on these classroom statistics, the investigators reason that bibliographic instruction is probably the main cause for increased workload for liaisons. Currently, the library is exploring the development of online tutorials to ameliorate this problem.

How can these numbers be explained when the HSC faculty ranked ''course-integrated instruction'' as the

10th most important of 17 tasks? Yang [6] similarly found that ''providing bibliographic instruction to students'' was rated even lower in importance, as last of 11 activities with 37.5% of faculty representatives responding that it was ''not important.''

Although HSCL liaisons are overwhelmed with instructional requests, the total number of academic faculty who request such instruction probably number in the high teens to low twenties. As such, they made up a small proportion of the client respondents. Those requesting course-integrated instruction for their students value it highly, as evidenced by repeat requests from year to year. Although the client survey does not reflect as much, all other evidence supports the idea that instruction is an important and effective activity performed by liaisons.

Liaison concerns

Liaisons also noted several other areas of concern in their open-ended responses, particularly as regards the fluid structure of the liaison program, which does not prescribe particular approaches:

■ Unit-funded liaisons versus library-funded liaisons: As described earlier, two liaison positions are currently funded by external units. Although this has been a boon for the library and the programs these liaisons serve, the arrangement has complicated the level-of-service issue. Unit-funded liaisons rightly provide more in-depth services to their users. Services appropriate to each level have yet to be codified.
■ Distance education and other growing programs: Several colleges are increasing the size of their on-campus student bodies, and one college in particular has created a large and successful distance education program. This distance program has doubled the size of the liaison's client base. Although the liaison has fewer in-person interactions with these off-site clients, more time is spent dealing with resource access questions. Instruction is relegated to a series of online modules that are time-consuming to create.
■ Residents: Like most academic medical centers, the HSCL has a relationship with the attached teaching hospital; however, this relationship is vaguely defined. The residents have intense information needs and are interested in receiving library services, yet the library receives no funding from the hospital and appropriate services, including liaison services, have not been formally delineated.

All three of these scenarios speak to the need for a more structured approach than the HSCL has employed, with clearer expectations for liaisons and real discussions with library leadership as to how changes to the LLP, academic unit, or unit-library relationship will impact workload.

Although new liaisons are oriented to the liaison program within their first few weeks of hire, there is no formal liaison-training program. Mozenter et al. [24] describe a formal month-long liaison-training program, covering goals, expectations, and activities related to liaison roles in acquisitions, library access services, bibliographic instruction, and reference services.

Such a formal training program could provide the expectations and structure that the HSCL liaisons seek.

SUMMARY AND RECOMMENDATIONS

Evaluation of the HSCL's LLP suggests that the program has met most of its goals. Although the response rate was low, clearly a core set of clients know about and use the program and the vast majority of these clients favor the continuation of the liaison program. Most program users indicate that their relationship with the library has improved and communications with the library have increased since the program began. All respondents who referred to their liaison by name provided exceptionally positive remarks. Faculty and students seem to value many of the same services. The most highly rated services are those ''traditional'' ones related to information access, collection development, and information dissemination. While clients responding to the survey did not rank bibliographic instruction highly, non-survey evidence suggests that it is an effective use of liaison time.

Liaison responses indicate that the liaison program has enhanced the reputation of the library and has increased communication with their clients. However, survey responses and anecdotal evidence indicate that the liaison program has been a victim of its own success in terms of increased workload. Liaisons perform a wide variety of the tasks suggested by Tennant et al. [8], however, most tasks are not completed as often as liaisons deem appropriate. Barriers to service provision and effectiveness include liaisons' lack of time, disengaged clients, email access problems, busy client schedules, and administrative uncertainty concerning appropriate levels of service. The existence of unit-funded liaisons and distance education programs and the initial reticence to dictate required services have caused some unintended consequences for the program.

Because this study examines a single institution, it is difficult to generalize the results. However, given the experiences of the HSCL liaisons and the snapshot that the survey results provide, the authors make the following recommendations for those planning or restructuring a liaison librarian program:
■ Library liaison programs are effective and worth the effort. Use the growing literature to plan and implement the program and to create evaluative tools for periodic program refinement.
■ Keep the program flexible enough to adapt to the information needs of diverse clientele but provide enough structure to make service expectations clear.
■ Provide liaisons with multiple means to understand such expectations. Training programs and steering groups as described by Mozenter et al. [24] can help keep programs on track.
■ Marketing the program and creating a desirable product can create a climate in which liaisons are extremely busy. Start the program slowly so that liaisons are not overwhelmed.
■ Carefully monitor workload. While subject special-

ization serves to streamline liaison learning and workflow, a successful program will provide liaisons with more service opportunities than time to complete them. Library leadership and liaisons must work together to keep workloads reasonable.

■ No matter how successful the program and how heavily marketed, some clients will not be engaged by the liaison program. Spend precious time and energy with the many clients who appreciate the need for liaison services.

■ Enjoy the experience. Liaison programs and subject specialization can facilitate close connections with clients, involve liaisons in the workings of the academic units, provide intellectual stimulation, enhance the work experience, and promote the library and improve services.

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Table 4
Faculty responses to use of services and importance of services

Liaison services	Percent using service	Use "rank"	Importance "score"	Importance "rank"
Basic research	36.4	2	3.8	1
Access to electronic journals	32.8	4	3.8	1
Database search assistance	33.6	3	3.8	1
Services, policies, and procedures	37.8	1	3.6	4
Materials owned	27.7	5	3.6	4
In-depth consults	16.0	11	3.5	6
Order books or journals	22.7	6	3.5	6
Convey information	21.9	7	3.4	8
Tour or orientations new clients	21.2	8	3.4	8
Course-integrated instruction	18.5	10	3.3	10
Class registration	20.2	9	3.1	11
Request databases demonstration	12.7	13	3.0	12
Meet or tour interviewees	6.7	14	2.9	13
Present at faculty meetings	13.5	12	2.7	14
Join research group	2.5	16	2.1	15
Present at journal club	3.4	15	1.9	16
Attend grand rounds	2.5	16	1.7	17

Note: "Ranks" are 1 = highest use or importance, 17 = lowest use or importance. Importance "scores" are based on a scale of 1–5: 1 = least important, 5 = most important.

Table 5
Student responses to use of services and importance of services

Liaison services	Percent using service	Use "rank"	Importance "score"	Importance "rank"
Basic research	21.6	1	4.1	1
Order books or journals	12.2	4	3.9	2
Access to e-journals	16.6	2	3.9	2
Services, policies, and procedures	9.4	6	3.8	4
Database search assistance	13.0	3	3.8	4
Materials owned	10.8	5	3.7	6
In-depth consultations	3.6	10	3.6	7
Request databases demonstration	5.0	8	3.5	8
Convey information	5.0	8	3.5	8
Class registration	5.8	7	3.4	10
Tour or orientations new clients	2.9	11	3.3	11
Course integrated instruction	1.4	12	2.7	12
Meet or tour interviewees	0.1	14	2.6	13
Join research group	—	15	2.5	14
Present at journal club	1.4	12	2.4	15
Present at faculty meetings	—	15	2.4	15
Attend grand rounds	—	15	2.3	17

Note: "Ranks" are 1 = highest use or importance, 17 = lowest use or importance. Importance "scores" are based on a scale of 1–5: 1 = least important, 5 = most important.

Table 6
Liaison services: frequency and perceived preference, sorted by frequency

Task	Frequency	Preference
Order books, journals, etc.	4.2	4.2
Inform patrons of library changes	4.1	4.0
Update patrons on new library services	3.9	4.2
Convey patrons' opinions to the library administration	3.5	3.8
Do in-office reference (via email, phone, etc.)	3.5	4.8
Participate in course-integrated instruction	3.2	4.4
Attend department curriculum committee meetings	3.1	3.9
Query faculty concerning collection	2.9	4.3
Do information consulting	2.8	3.2
Tour or orient new faculty, students, staff	2.8	4.1
Notify clients of new materials or resources	2.6	4.1
Do in-depth searching	2.6	2.8
Teach stand-alone database classes	2.5	3.4
Consult with faculty on instructional needs	2.5	4.3
Database demonstrations	2.4	3.9
Attend departmental faculty meetings	2.1	2.7
Provide current awareness service	2.0	3.5
Tour or orient faculty interviewees	1.7	3.2
Attend journal clubs	1.3	3.2

APPENDIX A
Client survey

Your college:
_____ Dentistry _____ Health professions _____ Medicine _____ Nursing _____ Pharmacy
_____ Veterinary Medicine
Are you:
_____Faculty ____Staff ____Resident ____Post-doc ____Student
If you responded ''Faculty,'' ''Staff,'' ''Resident,'' or ''Post-doc,'' what is your department? _____
If you responded ''Student,'' what is your degree program? _____
How long have you been employed by or enrolled in a health science center (HSC) department, college, or program?
_____ Less than six months _____ Six months to 2 years _____ 3 years _____ 4 years or more

 1. Did you know that a liaison librarian has been assigned to work with your department or program?
_____ Yes (continue to question 2) _____ No (go to question 7)
 2. Do you know who your liaison librarian is?
_____ Yes _____ No
 3. Have you ever had contact (in person, email, or otherwise) with your liaison librarian?
_____ Yes _____ No
 4. If you are not using your liaison librarian's services, please tell us why not (then continue on to question 7).
_____

 5. Has your relationship with the HSC Library improved since liaison services began?
_____ Yes
Why? _____
_____ No
Why not? _____
 6. Have your communications with the HSC Library increased since you were assigned a liaison librarian?
_____ Yes
Why? _____
_____ No
Why not? _____
 7. Do you support the idea of continuing the liaison librarian program?
_____ Yes
Why? _____
_____ No
Why not? _____
 8. To whom do you express concerns about the library?
_____ My liaison librarian _____ My department head _____ The library director/administration office _____
Other
Who? _____
 9. Some liaison librarians have expertise in the subject area to which they are liaison. How important is it that your liaison librarian have a subject background in your field?
_____ Very important _____ Somewhat important _____ Not important
10. How important is it for your liaison librarian to involve themselves in your field (i.e., attend conferences, receive newsletters, read top journals, etc.)?
_____ Very important _____ Somewhat important _____ Not important
11. What is the best way for your liaison librarian to communicate with you?
_____ Email _____ Office visits _____ Attend department, faculty, or curriculum meetings _____ Through your department chair _____ Other (How? _____)

12. In the boxes to the left of the statements below, please check the liaison services that you have used or contacted your liaison about. Please rank the importance of all of the services, using the radio buttons to the right of the statements. (1 being not important, 5 being very important)

Used	Importance				
	None				Very
_____ For basic research assistance	1	2	3	4	5
_____ For in-depth information consultations	1	2	3	4	5
_____ For information on specific library services, policies, or procedures	1	2	3	4	5
_____ To determine if specific materials are owned by the library	1	2	3	4	5
_____ To request a book or journal be ordered for the library	1	2	3	4	5
_____ For help accessing electronic journals	1	2	3	4	5
_____ To register for a library or database class taught or advertised by your liaison	1	2	3	4	5
_____ For help integrating library instruction into a class you teach	1	2	3	4	5
_____ For help with database searching	1	2	3	4	5
_____ To request a database demonstration	1	2	3	4	5
_____ To convey comments, questions, or concerns about the library	1	2	3	4	5
_____ To present at your journal club	1	2	3	4	5
_____ To present at your faculty or department meeting	1	2	3	4	5
_____ To attend grand rounds	1	2	3	4	5
_____ To request a library tour or orientation for faculty job or student interviewees	1	2	3	4	5
_____ To request a library tour or orientation for new faculty, staff, or students	1	2	3	4	5
_____ To ask liaison to join your research group	1	2	3	4	5
_____ Other: please describe _____	1	2	3	4	5

13. Please list or describe additional services you would like to see implemented in the Liaison Librarian Program.

APPENDIX B
Liaison librarian survey
1. What is your primary contact means with your liaison group?
_____ Email _____ Phone _____ In person
2. Please rank the following services by how often you perform them (1 being *never* and 5 being *often*).

	Frequency				
	Never				Often
Stand-alone database classes	1	2	3	4	5
Course-integrated instruction	1	2	3	4	5
Database demonstrations	1	2	3	4	5
Consult with faculty on instructional needs	1	2	3	4	5
Query faculty concerning collection	1	2	3	4	5
Order books, journals, etc.	1	2	3	4	5
Notify clients of new materials or resources	1	2	3	4	5
Information consulting	1	2	3	4	5
Inform patrons of library changes	1	2	3	4	5
Update patrons on new library services	1	2	3	4	5
Convey patrons' opinions to library administration	1	2	3	4	5
In-office reference (via email, phone, etc.)	1	2	3	4	5
In-depth searching	1	2	3	4	5
Attend departmental faculty meetings	1	2	3	4	5
Attend journal clubs	1	2	3	4	5
Attend department curriculum committee meetings	1	2	3	4	5
Tour or orient faculty interviewees	1	2	3	4	5
Tour or orient new faculty, students, staff	1	2	3	4	5
Provide current awareness service	1	2	3	4	5
Other: please describe:	1	2	3	4	5

3. Please rank the following services *you provide* in terms of your preference to perform (1 being *least* and 5 *most*). [Note: the same list as in question 2 was provided.]

4. Of the services that you provide your clients, which three do you think have the greatest impact? What evidence do you have of this impact? ⎯⎯⎯⎯⎯

5. What additional services would you like to provide your clients? ⎯⎯⎯⎯⎯

6. Do you enjoy being a subject specialist?

⎯⎯⎯ Yes
Why? ⎯⎯⎯⎯⎯
⎯⎯⎯ No
Why not? ⎯⎯⎯⎯⎯

7. Which activities have you performed to help yourself become a better subject specialist/liaison?

⎯⎯⎯ Joined the appropriate Medical Library Association (MLA)/Special Libraries Association (SLA) division, section, special interest group
⎯⎯⎯ Joined the appropriate MLA/SLA email discussion list(s)
⎯⎯⎯ Taken continuing education course(s) in your subject area
⎯⎯⎯ Taken academic course(s) in your subject area
⎯⎯⎯ Attended academic seminar(s) in your subject area
⎯⎯⎯ Read the subject literature
⎯⎯⎯ Read academic department newsletters
⎯⎯⎯ Frequently visited department faculty Web pages
⎯⎯⎯ Other. Please describe ⎯⎯⎯⎯⎯

8. What type of support from the library would help you become a better liaison librarian? ⎯⎯⎯⎯⎯

9. What has been the most challenging aspect of being a liaison? Why? ⎯⎯⎯⎯⎯

10. What groups of patrons have you not been able to reach, approach, or engage? ⎯⎯⎯⎯⎯

11. For those liaisons who were here before the liaison program started, have communications from your users to you increased since the advent of the liaison program?

⎯⎯⎯ Yes ⎯⎯⎯ No

12. For those liaisons who were here before the liaison program started, how have your liaison activities impacted your workload? How has subject specialization impacted your workload? Please discuss both positives and negatives. ⎯⎯⎯⎯⎯

13. How many total hours per week do you spend on liaison activities (remember, these activities include collection development, course-integrated instruction, and subject specific bibliographic instruction for your clients, consultations, email notifications, client-requested searches, patron queries that come directly to you, etc.). ⎯⎯⎯⎯⎯

14. When your subject area overlaps with that of another liaison, do you coordinate with the appropriate liaison?

⎯⎯⎯ Yes ⎯⎯⎯ No
If your answer is yes, what methods do you use? ⎯⎯⎯⎯⎯

15. Do you think that the liaison program has enhanced the reputation of the library and its librarians?

⎯⎯⎯ Yes ⎯⎯⎯ No
If yes, what evidence do you have of this enhancement? ⎯⎯⎯⎯⎯